PBT Advisory Committee
Final Meeting Notes
October 14, 2004

The fourth meeting of the PBT Rule Advisory Committee was held on October 14th, 2004 in Tacoma, Washington. The meeting was held at the at the Tacoma Wastewater Treatment Plant's Transmission Meeting Room. A copy of the meeting agenda is included as Attachment 1* on the Ecology PBT Rule web page (for October 14, 2004).

The following advisory committee members attended the meeting:

Kate Davies, Physicians for Social Responsibility
Dave Galvin, King County Hazardous Waste Management
Steve Gilbert, Institute of Neurotoxicology and Neurological Disorders
Diana Graham, American Chemistry Council
Pete Hildebrandt, Washington State Petroleum Association and Alcoa
Jeff Louch, National Council for Air and Stream Improvement
Grant Nelson, Association of Washington Businesses
Ivy Sager-Rosenthal, People for Puget Sound
Gary Smith, Independent Business Association
Pam Tazioli, The Breast Cancer Fund
Laurie Valeriano, Washington Toxics Coalition

Ecology staff presenting information during the committee meeting:

Dave Bradley, Department of Ecology
Mike Gallagher, Department of Ecology

The following representatives from government agencies signed in:

Rick Manugian, Department of Ecology
Greg Sorlie, Department of Ecology
Pat Springer, EPA Region 10
Ted Sturdevant, Department of Ecology
Ann Wick, Washington State Department of Agriculture

Additional stakeholders and members of the public also signed in:

Philip Dickey, Washington Toxics Coalition
Mark Greenberg, American Chemistry Council
Lincoln Loehr, Heller Ehrman
Llewellyn Matthews, NW Pulp and Paper Association

Marc Daudon facilitated the meeting and Marley Shoaf took notes.

Convene and Welcome

Marc Daudon welcomed the committee and public audience to the fourth PBT Rule advisory committee meeting. Marc explained that the purpose of the meeting was to 1) discuss policy issues related to the purpose of the PBT Rule and PBT list, 2) describe and discuss technical

approaches to characterize persistence, bioaccumulation, and toxicity, 3) present and discuss alternative PBT criteria identified at the September 8th advisory committee meeting, 4) discuss policy implications associated with PBT criteria and the PBT list, 5) discuss technical approaches for ranking and prioritizing the PBT list, and 6) identify information that could be useful to support preparation of the draft Rule. Marc explained that Ecology revised the meeting agenda to include policy issues, based on committee member comments.

Marc distributed the advisory committee process guidelines and reviewed the ground rules and expectations with the committee. Marc explained that the PBT Rule advisory committee process is a consultative process and that Ecology is seeking input from the committee, not consensus.

Policy Discussion

Mike Gallagher distributed the following revised sections of the draft PBT Rule: 1) Rule purpose, 2) definitions, and 3) PBT list purpose (all included as Attachment 2* on the Ecology PBT Rule web page for October 14, 2004). Mike explained that Ecology received feedback from advisory committee members that they would like Ecology to clearly define the purpose of the PBT Rule and the purpose of the PBT list.

Purpose of the PBT Rule

Mike presented Ecology's revised PBT Rule purpose which consists of a brief introduction and four purpose statements (a-d): a) establish criteria Ecology will use to identify PBT chemicals, b) establish a list of PBTs, c) establish criteria for selecting PBTs for chemical action plans (CAPs), and d) define the scope and content of CAPs and a process to prepare CAPs. He explained that Ecology added an introductory paragraph to the purpose that incorporated a brief description of the 2000 Strategy document and the goals outlined in the Strategy. Committee members' comments on the revised PBT Rule purpose included:

- **Add the word "process" to part (a) and (c).** One member suggested that Ecology should expand part (a) and (c) to include the word "process" so that the statements read "establish criteria and process for…"
- **How will chemicals be added or removed from the PBT list?** One member asked Ecology to clarify how chemicals will be added and removed from the list. Ecology clarified that removing or adding a chemical to the PBT list would be done through a rule making process.
- **Is Ecology or Washington State adopting the Rule?** One member asked Ecology to clarify whether or not the State would adopt the PBT Rule or if the Rule would only be adopted by Ecology. The member stated that it is preferable for local governments to follow State guidelines and it is his preference that the State adopts the PBT Rule. He suggested that Ecology could replace the word "Ecology" with the word "State" in the purpose section. One member said that the Administrative Procedures Act is set up for one agency to adopt a rule, not multiple agencies. Ecology explained that if they adopt the Rule, they will be adopting it for the State because they are a state agency and the Rule will have statewide implications. Ecology also said that rules drafted by Ecology typically refer to Ecology and not the State.
- **Ecology should not reference the 2000 PBT Strategy in the purpose section.** Several members expressed their opinions that Ecology should not incorporate the 2000 Strategy into the purpose section. There was disagreement about whether or not the Strategy should be referenced at all. Some members would like the Strategy to be included in a goals section, while other members said that the purpose of the PBT Rule is clearly defined in parts (a)-(d) and no additional sections or statements of goals are needed.

- **The purpose of the PBT Rule is defined in parts (a)-(d):** One member read a letter written by Linda Hoffman, Department of Ecology Director, to Senator Zarelli (included on the Ecology PBT web page under "Information provided by advisory committee members"* – see meeting #4, October 14, 2004). He stated that the PBT Strategy is not referenced in the budget request and that the purpose of the PBT Rule is to define PBTs. He said that the business community supported funding for the PBT Rule because the purpose of the Rule was strictly parts (a)-(d). He also stated that if new language is adopted in the purpose section, then the Rule is not going to be a procedural rule.
- **Add a Goal section to the Rule that incorporates the PBT Strategy goals.** Members representing environmental interests submitted an alternative draft Rule, which is included on the Ecology PBT web page under "Information provided by advisory committee members"* – see meeting #4, October 14, 2004). One member explained that the revisions made to the original draft Rule include adding "goals" to the purpose section, modifying the purpose language, and adding language to the Administrative Principles section. She said that the goal of the PBT Rule is to facilitate the implementation of the Strategy; therefore, the Rule should include the goals of the PBT Strategy. She pointed out that the legislature funded the PBT Rule making process based on the Strategy; therefore, the Rule should incorporate the Strategy. One member said that the rulemaking should be grounded in the larger goal of reducing and eliminating PBTs and that the goal needs to be communicated to the public and business communities. Another member agreed that a goals section should be included and that this is the only PBT process that she knows of that does not have a goals statement.
- **The goals from the PBT Strategy should not be included in the PBT Rule.** One member said that Ecology should reference the PBT Strategy and that the specific goals from the Strategy do not need to be detailed in the Rule. Some members agreed and said that the goals of the Strategy are not consistent with the purpose of the Rule. One member disagreed and said that the Strategy is the overarching framework for the PBT Rule and that the Strategy needs to be referenced and detailed in the Rule.
- **Ecology should include the precautionary principle in the goals section.** One member distributed information (included on the Ecology PBT web page under "Information provided by advisory committee members"* – see meeting #4, October 14, 2004) on why and how the precautionary principle should be applied to the PBT Rule and examples of the precautionary principle in policy language. She would like Ecology to include a statement about the precautionary principle in the Rule as well as the Administrative Principles section.
- **Ecology could adopt a purpose statement similar to the EPA's, rather than including the 2000 Strategy goals.** One member suggested that if Ecology wants to add a purpose statement other than what is listed in (a)-(d), Ecology could incorporate the language used in the EPA's PBT program. He said that he prefers the language used in the EPA's PBT program and suggested that Ecology use phrases like "reduce risk to human health and the environment," rather than "reduce and eliminate."

Purpose of the PBT List

Mike presented Ecology's draft PBT list purpose (See Attachment 2*, above). He explained that the PBT list will identify PBT chemicals and that the purpose of the list is not to ban chemicals or call for additional environmental regulations or statues. He explained that Ecology intends to use the PBT list in four ways, listed in the purpose section as 1(a) – 1(d): (a) identify chemicals for CAPs, (b) identify chemicals that are a priority for monitoring, (c) voluntary measures, and (d) public education and environmental information. Advisory committee comments regarding the purpose of the PBT list included:

- **Clarification on section 1(c).** A committee member asked Ecology to clarify section 1(c) – voluntary measures. Mike explained that if Ecology's PBT list is slightly different than a list developed by another agency (e.g., EPA's PBT list), Ecology's list will not supersede that agency's list. He said that the statement is an attempt to predict that Ecology's PBT list may be different than EPA's list.
- **Human health needs to be included in the purpose of the PBT list.** One member pointed out that Ecology did not discuss human health or reference the Department of Health in the PBT list purpose. He said that health is the most important piece of the PBT program and it is not reflected in the purpose of the PBT list. Other members agreed that health needs to be included in the purpose, specifically in part 1(a) and (b).
- **The Department of Health should be referenced.** Several members said that the Department of Health should be referenced in the purpose section. ACTION ITEM: Ecology will check on referencing the Department of Health in the purpose.
- **The purpose needs to use stronger language.** One member would like Ecology to use stronger language in the purpose section. He suggested changing 1(b) which states that "the PBT list is not intended to be used to require specific permit monitoring" to "the PBT list shall not be used to require specific permit monitoring." He also said that 1(c) should involve "promoting voluntary reductions" which is consistent with Director Hoffman's remarks in the letter to Senator Zarelli.
- **Part 2 wording needs to be revised or eliminated.** One member was strongly opposed to the language used in part 2, "the PBT list is not a listing of chemicals that should be banned." She said that this statement pre-determines the CAP process and that one of the options in a CAP is to ban a chemical. Another member stated that part 2 does not need to be included in the Rule because it is evident that Ecology cannot ban a chemical because it is on a PBT list.
- **Part 2 wording needs to be included in the Rule.** One member said that the part 2 language is important and should stay in the rule. He said that Ecology needs to revise part 2 with clear language regarding the banning of chemicals.
- **Ecology does not need to explain what is specified in WAC 173-XXX-110.** One member said that Ecology does not need to list the specific purpose of the PBT list 1(a)-(d). He said that referencing WAC 173-XXX-110 is sufficient.
- **Part 3 should be included in part 1(a).** One member said that part 3 should be included in 1(a) so that the reader understands that CAPs are not regulations. One member disagreed and said that part 3 applies to all of the purposes of the PBT list, not just the CAP.
- **Replace "possible" with "feasible."** One member said that Ecology should replace the word possible with the word feasible. He explained that feasible is a more appropriate word to be used in the Rule.
- **Can the PBT list only be used for the purposes defined in Part 1(a)-(d)?** One member questioned whether or not the PBT list could be used for purposes in addition to the four listed by Ecology. He said that members in the community could use the list as a way to flag chemicals and make decisions on which chemicals to use based on whether or not a chemical makes the PBT list. One member said that the purpose of the list is to select chemicals for CAPs and that if an agency wants to take action independently of what the purpose of the list is, they can do so. Another member disagreed, stating that the purpose of the list is not just to develop CAPs. She referred to the actions detailed in the Strategy document (e.g., develop CAPs, identify and implement pollution prevention measures, enhance clean-up efforts) and said that the actions are also important aspects of the purpose of the PBT list.

- **The business community should be targeted for education and environmental information.** One member said that the business community, as well as the general public should be included in part 1(d). He said that it is important to educate the business community as well as the general public about PBT issues.
- **Public education should be expanded to more than just "raising awareness."** One member said that public education is not just about increasing the awareness of PBTs. He said it is more important for people to know where PBTs are in the environment and in which products and processes they exist.
- **The purpose statements need to be more positive.** One member said that Ecology should replace the negative (e.g., not, shall not) statements with statements about what the purpose *is,* rather than saying what the purpose *is not.* She suggested that Ecology could use the Appendix F language from the Stockholm Convention.
- **Some businesses are interested in phasing out toxic chemicals**. Committee members discussed current efforts by businesses and industry to phase out toxic chemicals. One member pointed out that there are many progressive companies looking for ways to phase out their use of toxic chemicals and that the PBT list can be used to determine which chemicals may be best to phase out. Some members agreed that many companies voluntarily use safe, alternative chemicals; however, the companies do not want a PBT list that implies that certain chemicals will be banned.

Comparison of Alternative PBT Criteria

Dave Bradley, Department of Ecology, presented technical information on alternative PBT criteria. His presentation is included in Attachment 3* (on the Ecology PBT Rule web page for October 14, 2004. Background discussion materials were distributed to advisory committee members prior to the committee meeting and are included in Attachments 4*, 5*, and 6* (on the Ecology PBT Rule web page for October 14, 2004). Dave explained that the purpose of his presentation was to 1) present and discuss the results of Ecology's comparison of alternative PBT criteria identified at the September 8th advisory committee meeting, 2) discuss technical approaches used to characterize persistence, bioaccumulation, and toxicity and 3) discuss policy implications and perspectives associated with PBT criteria and PBT list decision-making. Dave summarized PBT criteria discussions from previous meetings and stated Ecology's operating assumptions for identifying PBT criteria (e.g., not all chemicals are PBTs, precaution is built into current methods and measures, and current technical information provides solid foundation). Dave explained that Ecology put together four alternative sets of criteria (A, B, C, and D) based on the September 8th meeting and determined how the criteria affect the PBT list by comparing the length of the PBT list for each alternative. The alternative sets of criteria were applied to a list of chemicals and chemical groups that had previously been identified as PBT chemicals by one or more federal or international government agencies. (see Attachment 4*).

Ecology's initial observations from the comparison of alternatives are that 1) higher criteria for persistence and bioaccumulation result in shorter PBT lists, 2) the choice of criteria does not seem to have an impact on core groups of chemicals, 3) similar lists are generated using a regional half-life of 580 hours and media-specific half-life values of 2 months for soil and surface water, 4) it is unclear how the results would apply to chemicals that have not previously been considered by other agencies, 5) five-fold reduction of the toxicity fenceline for human toxicity does not result in a change in the number of chemicals meeting PBT criteria, and 6) most of the information used to characterize the persistence, bioaccumulation potential and toxicity of individual chemicals was obtained from high preference data sources (as identified by EPA). Dave explained that Ecology is relying on peer-reviewed literature, but that uncertainty is

important to recognize. Advisory members had the following questions and points of clarification:

- **Did Ecology use the half-life data from the Toxics Release Inventory (TRI)?** One member asked if Ecology used the TRI data and if they used the mean, median, or average half-life for each chemical. Dave explained that Ecology used the mid-range half-life values and that Ecology will re-analyze the data to determine the effect on the PBT list length of using a short half-life value versus a long half-life value.
- **Did Ecology consider advection in the analysis?** One member asked if Ecology accounted for advection in their analysis because it could have a significant effect on the calculated half-lives. Dave said that he did not consider advection.
- **What does Ecology mean when they state that precaution is built into current measures?** One member asked what Ecology meant by stating that one of their operating assumptions was that precaution is built into current measures. Dave explained that toxicology studies using animal data have precautionary factors built in, typically called safety factors. He said that the safety factors are what he was referring to when he said precaution is built into current methods and measures.
- **Media-specific half-lives are consistent with the big picture.** One member said that media-specific half-lives are consistent with the big picture and suggested that Ecology could develop a Washington-specific half-life as part of the CAP process.
- **It is useful to consider information from multiple databases.** One member said that it is beneficial that Ecology used multiple databases developed by different groups in their analysis of criteria. She said that using multiple sources helps to determine if Ecology is in the right "ball park" or not.
- **Ecology should lower the toxicity criteria by ten-fold, not just five-fold.** One member stated that if Ecology is truly using a precautionary approach, then they should lower the toxicity fenceline by ten-fold. She would like to see the effect of lowering the toxicity by ten-fold on the number of chemicals that would make the PBT list. ACTION ITEM: Ecology will compare the length of the PBT list using a five-fold reduction versus a 10-fold reduction.
- **Ecology should determine how the criteria apply to a larger list of chemicals.** One member stated that she would like Ecology to consider EPA's larger list of 142 chemicals and determine how the PBT criteria apply to additional chemicals.
- **Ecology should consider individual sensitivity in their definition of risk.** One member pointed out that Ecology needs to incorporate sensitivity into their risk paradigm. Currently, Ecology (from the discussion materials) stated that risk is a function of chemical hazard and exposure to the chemical. One member said that risk is also a function of individual sensitivity.
- **The United Nations Economic Commission for Europe's (UNECE) list is relevant to our societal issues.** One member said that the UNECE list is appropriate for our society and that Alternative C most resembles the UNECE. She stated that she prefers a shorter list because it is more likely that Ecology can take action with a shorter list.
- **It is important to consider how chemicals are grouped on different lists.** A member from the audience pointed out that it is important to consider how chemicals are grouped on the various PBT lists. For example, the list of 160 chemicals from the Waste Minimization and Prioritization Tool **(**WMPT) is a list of specific, individual chemicals. If the list was presented by chemical class or chemical family (e.g., all PAH chemicals combined into one PAH category), the PBT list would be much shorter.

- **Committee members requested Ecology to expand the comparative analysis and include three additional sets of criteria:**

    (1) Alternative E - The PBT list should be based on the (WMPT). One member said that Ecology should use the list of 160 chemicals from the WMPT that received a score of nine to create their PBT list. She said that using the WMPT generated list creates a manageable and simple method to create a list from which Ecology can start to apply ranking and prioritization criteria. She stated that this selection process will result in a comprehensive list and will provide the public, businesses, and government with a list of chemicals that pose hazards. She supports a comprehensive list to start with because of the amount of resources that will be needed in the future to add or remove a chemical from the PBT list. One member pointed out that there are number of different views of the WMPT within the EPA. Ecology explained that applying Alternative A criteria results in a PBT list of approximately 160 chemicals, which is similar in length to the proposed PBT list using the WMPT.

    (2) Alternative G - Create a PBT list using a ten-fold decrease in EPA's fenceline toxicity values. One member would like Ecology to use the following criteria: (1) persistence (surface water and soil half life fence lines = 2 months); (2) bioaccumulation (BCF or BAF > 1000) and (3) toxicity criteria values that are 1/10 the EPA fenceline values.

    (3) Alternative H - Ecology should start with a PBT list that is consistent with EPA's list. One member said that the business community is concerned about the costs that will be associated with a chemical appearing on the PBT list. He said a good place for Ecology to start is with the EPA's list and that, as CAPs are being developed, Ecology can determine if there are costs associated with a chemical appearing on the PBT list. He said that Ecology can return to the PBT list in the future with a better understanding of the cost associated with a chemical appearing on the PBT list.

Dave briefly discussed screening factors that have been used in the past to determine which chemicals belong on a PBT list. He explained that the Legislature has applied a screening factor to Ecology's PBT list by excluding registered pesticides and fertilizers from the PBT list. Dave presented additional screening factors that may be applied, including the chemical's use or presence in Washington, Federal listings, or other rule making criteria. Committee members were asked to comment on additional screening factors that Ecology could consider. Comments and questions regarding screening factors included:

- **Is there a list of chemicals that are used in Washington?** One member asked if there is a list of chemicals that are used in Washington. Ecology said that no comprehensive list exists.
- **Are chemicals analyzed in environmental samples?** Ecology explained that many chemicals are not analyzed in environmental samples (e.g., soil and water).
- **Federal listing should not be an additional screen.** One member stated that the presence of a chemical on a federal PBT list should not influence the chemical's presence on Washington's PBT list.
- **Ecology should utilize data from the United States Geological Survey (USGS).** One member asked if Ecology has looked at chemical monitoring by the USGS and suggested that the USGS may have a lot of useful data. Ecology said they have not reviewed the USGS data.

Public Comment

Philip Dickey: Staff scientist with the Washington Toxics Coalition. He said that some of the alternative criteria presented by Ecology will lead to a very short PBT list of legacy chemicals and that it will be hard for Ecology to take action on the chemicals that would be on that list. He supports a broad chemical list so that Ecology has several chemicals to choose from for CAP development. Philip supports a proactive approach for addressing PBT chemicals and said that a short list of chemicals for which little action can be taken, is not useful.

Technical Approaches to PBT Ranking and Prioritization

Dave presented an overview of Ecology's existing PBT ranking process which included the methodology used, information sources, and relative rankings. His presentation is included in Attachment 7* on the Ecology PBT Rule web page for October 14, 2004. Dave distributed materials on Ecology's 2002 proposal for ranking and prioritizing PBT chemicals (Attachment 8* on the Ecology PBT Rule web page for October 14, 2004). He explained that Ecology's "Strawman" ranking process (based on the 2002 proposal) was a two-step process to rank and prioritize chemicals. Ranking was based on PBT characteristics, environmental presence, and source releases and chemicals were ranked into three categories: high, medium, and low.

Dave summarized the advisory committee's issues and recommendations from the September 29th advisory committee meeting. Issues and recommendations were that Ecology should 1) consider using a phased approach for ranking and prioritization, 2) consider a wide range of factors, 3) consider the use and purpose for ranking and prioritization, and 4) establish categories to avoid issues associated with too much precision. Advisory committee comments on the technical approaches to ranking and prioritizing PBTs included:

- **Two-step approach is a good approach**. Committee members said that the two-step approach to ranking and prioritizing chemicals is a logical approach.
- **Mixed opinion about the usefulness of the high, medium, and low ranking categories**. Several members supported grouping chemicals into a high, medium, and low category. One member questioned the value of ranking chemicals if the action that is taken for a chemical is not necessarily based on the chemical's ranking. Another member said that ranking is useful because it gives Ecology the ability to determine which chemicals have higher PBT characteristics or which chemicals need additional information.
- **Ecology should include information for individual chemicals**. One member said that it would be useful if the final Rule included a simple table describing the factors that Ecology considered for the specific chemical and highlight why the chemical made the PBT list. He said that this would help reveal some of the uncertainty about the chemicals for which little data exist.
- **Non-detect vs. not measured.** A member from the audience asked Ecology to clarify whether or not they separated chemicals (for ranking purposes) that were not detected versus chemicals that were not measured. Ecology said that when the chemicals were ranked, they considered the non-detected chemicals and the non-measured chemicals to be the same. The audience member pointed out that one of the purposes of the PBT list is to see where testing needs to be done and that non-detects versus non-measured chemicals needs to be specified in the list.
- **Data to determine the presence and source releases need to be expanded**. One member said that the data used to determine sources release and presence in the environment should be expanded to include body burden information and should include

data from the Model Toxics Control Act (MTCA), not just the National Priorities List (NPL). She stated that if Washington data are not available, then data from other geographical areas should be considered.
- **Prioritization step should be more qualitative.** One member said that the numerical approach is appropriate for ranking, but that she would like Ecology to use a more qualitative prioritization process.

Dave presented the range of factors identified at the September 29th meeting that Ecology could use to rank or prioritize chemicals. Factors included PBT characteristics, use in Washington, release and presence in Washington, exposure pathways, opportunities for reduction, minimization, and elimination, cost and benefit of measures, technical feasibility of measures, and other regulatory program requirements. Committee members discussed where each of these nine factors fit into chemical ranking, prioritization, and CAP development. Committee member commented on these factors:

- **Ecology needs to consider multiple exposures to chemicals.** One member said that Ecology should determine a way to include multiple chemical exposures as a factor. He said that reference doses do not consider multiple exposures or synergistic effects of chemicals. He said that as scientists learn more about multiple exposures and genetic polymorphisms, it is important to have flexible criteria.
- **Ecology should consider co-occurring chemicals.** One member said that Ecology should consider co-occurring chemicals. She used incineration by-products as an example and said that if Ecology controls for one group of chemical by-products, they will automatically be controlling another group of by-products because the chemicals are part of the same process.
- **Exposure pathways should be separated into two groups.** One member pointed out that committee members previously suggested that the exposure pathways factor should be separated into exposure pathways (health) and exposure pathways (ecological). The factors presented by Ecology this meeting did not reflect the change suggested by advisory committee members at the last advisory committee meeting.
- **Ecology needs to have a step between ranking chemicals and the CAP process.** One member said that Ecology should have a step or process between chemical ranking and the CAP, such as a dossier. He said that Ecology needs a framework by which they can look at chemicals very carefully before they promulgate regulation or action. He stated that the committee is making too large of a leap from chemical ranking to the CAP process and that a thorough dossier or risk assessment is a necessary intermediate step.
- **Long vs. short PBT list.** Members disagreed on the length of the PBT list. One member supporting a short list said that there is a limited amount that Ecology can do with limited resources and that he would like to get back to the practical side of the list and focus on places that Ecology can make a difference. One member spoke on behalf of breast cancer patients and said that she would be doing a disservice to the patients if she did not advocate for a longer PBT list. She said that the pattern of breast cancer in women is occurring in younger and younger aged women with no genetic history of cancer.
- **The PBT program should focus on chemicals that are very persistent, bioaccumulative, and toxic.** One member said that the PBT program should only be focusing on chemicals that are highly persistent, bioaccumulative, and toxic. She said that the program should deal with chemicals for which no other regulating body exists. She asked if Ecology's PBT program was developed because existing regulatory frameworks are inadequate.

- **Some of the factors are flawed.** One member pointed out that the use, release, and presence in Washington factors are flawed because of the lack of data. He said that Ecology needs to be careful if they are hinging their chemical rankings on factors for which data is non-existent or suspect.
- **Cost and benefits of measures, technical feasibility of measures, and other regulatory program requirements belong in the CAP process.** A few members said that the cost and benefits, technical feasibility, and other regulatory program requirements are factors that belong in the CAP process, not in the prioritization step.
- **Chemicals should be ranked based on PBT characteristics and use, release, and presence in Washington.** One member said that it makes sense to include PBT characteristics and use, release, and presence in Washington as factors for ranking chemicals. She suggested that more weight should be given to the chemical's intrinsic PBT characteristics. She said that prioritization should be based on a subjective look at the opportunity for elimination and availability of safer alternatives.
- **Mixed opinion about presence in Washington as criteria.** A couple of members said that if a chemical is not used in Washington or is not present in Washington's environment, then it should not be on the PBT list. Other members disagreed and said that just because a chemical in not present in Washington now, does not mean it will not be present in the future.
- **Disagreement on where exposure pathways should be considered in the ranking and prioritization process.** Committee members discussed and disagreed on how exposure pathways should be considered in the ranking or prioritization process. Some members said that health and ecological exposure pathways should be the most important priority for determining which chemicals receive CAPs. One member said that if a chemical is known to cause cancer, then it should be placed higher on the list than other chemicals. Some members disagreed and said that the health and environmental associations have already been made for chemicals on the PBT list and that the focus should be on opportunities for reduction and elimination. One member said that the exposure pathway analysis or exposure assessment should be done in the CAP process in order to determine what can be done about the chemical. Committee members discussed the exposure pathways issue at length and disagreed on its application to the ranking and prioritization process.
- **Disagreement on how factors should be considered in ranking and prioritizing.** There was no general agreement among committee members regarding the factors that should be considered in the ranking process versus the factors that should be considered in the prioritization process. Committee members agreed that Ecology needs to develop this piece of the draft Rule and put it in writing.

Next Steps

- Committee members who would like to suggest specific language changes for the Rule should submit changes to Mike. He will post the proposed changes on the PBT website to allow committee members to comment on the suggestions.
- Ecology will continue to analyze the alternative criteria and compare the length of the PBT list using a ten-fold reduction in the toxicity fenceline versus a five-fold reduction.
- Ecology will look at how the alternative criteria affect metal listing on the PBT list.

*Attachments can be found on the Department of Ecology's website.

Meeting adjourned